Migrating from ZENworks Desktop Management to ZENworks 11
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Since 2007 we have continued to invest in this platform by integrating all aspects of managing an endpoint's lifecycle, and ZENworks 11 now enables you to configure the following using a single management platform:

- Windows, Linux and Apple Macintosh devices
- Hardware and software Inventory
- Asset management
- Patch management
- Endpoint security management
- Reporting

Customers who own ZENworks Desktop Management or other legacy products that address these have been migrating to the new platform for the last five years; however, some customers have chosen to remain on legacy solutions. This guide focuses on ZENworks Desktop Management customers who are considering migrating to ZENworks 11. This guide addresses the major differences between the products and challenges that you may see as roadblocks to adoption.

What Is ZENworks?
To understand where you are going, we must first cover where you are today. Whatever solution you are using to manage your endpoints, you will want your new infrastructure to be as flexible, simple and scalable as your existing environment. Therefore, you should have a solid understanding of the architectural differences between existing versions of ZENworks 11 and earlier versions of ZENworks Desktop Management.

ZENworks Desktop Management
Migration to ZENworks 11 is supported from these versions of ZENworks:

- ZENworks for Desktops 4.0.1
- ZENworks Desktop Management 6.5
- ZENworks 7.x Desktop Management

The traditional ZENworks architecture is two-tiered and relies on direct access to the object store (Micro Focus eDirectory™) for configuration information. Every workstation is required to have Novell Client32™ installed or the ZENworks Middle Tier Server configured properly to access ZENworks services. Specifically, it needs object information, or logic, stored in eDirectory. In traditional ZENworks, it is important to note that the bulk of the logic and processing are handled on the client side in the form of policy searching, launcher refreshing and so on.

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![Figure 1. ZENworks Desktop Management Architecture](image-url)
The traditional ZENworks architecture is characterized as follows:

- The ZENworks Management Agent is installed on every workstation.
- Client32 is required in a NetWare® environment.
- The use of the ZENworks Middle Tier server is required when the OES Windows Client is not installed on the managed devices.
- eDirectory is the key requirement as the object store for all users’ workstations and ZENworks objects.
- Micro Focus ConsoleOne® is required to manage the ZENworks infrastructure.
- All access to the eDirectory environment is via the NetWare Core Protocol (NCP).

- The product is cross-platform and supports services running on Linux, NetWare and Windows.

ZENworks 11

ZENworks 11 features a three-tier architecture, commonly known as a services oriented architecture (SOA). This architecture separates the components, making the product far more modular. Now the various tiers can be updated independently, making it easier to change business logic or add new modules. Proof of this ability to update our offerings in a single platform can be seen by looking at a snapshot of the ZENworks release history (see Table 1 below).

<table>
<thead>
<tr>
<th>Year</th>
<th>Version</th>
<th>What</th>
<th>Replaced</th>
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<tbody>
<tr>
<td>2007</td>
<td>ZENworks 10</td>
<td>ZENworks 10 Configuration Management</td>
<td>ZENworks Desktop Management 7.x</td>
</tr>
<tr>
<td>2007</td>
<td>ZENworks 10</td>
<td>ZENworks 10 Asset Management integrated</td>
<td>ZENworks Asset Management 7.x</td>
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<td>2008</td>
<td>ZENworks 10</td>
<td>ZENworks 10 Patch Management integrated</td>
<td>ZENworks Patch Management 6.x</td>
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<tr>
<td>2010</td>
<td>ZENworks 10 SP3</td>
<td>Windows 7 Support</td>
<td>New capability</td>
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<tr>
<td>2010</td>
<td>ZENworks 10 SP3</td>
<td>Smart card authentication support</td>
<td>New capability</td>
</tr>
<tr>
<td>2011</td>
<td>ZENworks 11</td>
<td>ZENworks Linux Management integrated</td>
<td>ZENworks 7 Linux Management</td>
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<td>2011</td>
<td>ZENworks 11</td>
<td>ZENworks Endpoint Security integrated</td>
<td>ZENworks Endpoint Security Management 4.x</td>
</tr>
<tr>
<td>2012</td>
<td>ZENworks 11 SP2</td>
<td>ZENworks Full Disk Encryption</td>
<td>New capability</td>
</tr>
<tr>
<td>2012</td>
<td>ZENworks 11 SP2</td>
<td>Apple Macintosh support</td>
<td>New capability</td>
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Table 1. ZENworks capabilities by release

With ZENworks 11, the server-side infrastructure consists of two tiers. The first is the data model, and the second comprises the file system (to store actual files), the database (for storing ZENworks information) and the optional identity store, which allows user-based resource management. With ZENworks 11, eDirectory and Microsoft Active Directory are supported natively as sources for user identity information.

In the new architecture, ZENworks 11 has been decoupled from eDirectory. You no longer need to manage a directory to provide systems management services. This does not mean you cannot benefit from integrating ZENworks 11 with your existing eDirectory environment. In fact, you can continue to use your existing directory infrastructure for user identity information, but you do not need to extend the schema or install the product on a server that runs eDirectory.

From an architectural perspective, the managed device communicates with the primary server back-end web service, and the primary server tells the client what to do and where to obtain content. In effect, the server sends instructions to the client, and the client uses the required handler to perform the task, such as installing software, applying a policy, managing systems remotely and so on.

![Figure 2. ZENworks three-tier architecture](image-url)
From an identity perspective, the user of a managed device authenticates directly to the identity store where each user's object is stored, either eDirectory or Microsoft Active Directory. The only identity-related information stored in the ZENworks object store is a reference object pointing back to the actual identity. This method increases the efficiency of user-based resource management.

The new ZENworks 11 architecture has the following important characteristics:

- Installation of the ZENworks Adaptive Agent on every managed device
- Three-tier service-oriented architecture (SOA)
- Additional primary servers for computing tasks, which removes the workload from the managed device
- No specific requirement for eDirectory
- No requirement for Novell Client32 to be installed on either the managed device or the server
- A new web-based administrative console (ZENworks Control Center) to manage all ZENworks objects, configurations and functions
- Native support for both eDirectory and Microsoft Active Directory
- Based on industry-standard protocols
- Direct, one-time server installation; then managed devices are deployed from the server through the ZENworks Control Center
- Installation of primary server software on Windows Server 2003, Windows Server 2008 or SUSE Linux Enterprise Server

Why Change?

For a seasoned ZENworks Desktop Management veteran, some of the new concepts and naming conventions in ZENworks 11 may not seem obvious at first. Make no mistake, ZENworks 11 embraces the core strengths of ZENworks Desktop Management, but ZENworks 11 offers these in an open and secure manner in a heterogeneous environment that may mix physical and virtual servers, Microsoft and Linux servers, and eDirectory and Microsoft Active Directory and many other variants.

We will now take a closer look at some of the areas where ZENworks 11 does things differently and better.

Flexible Management Paradigm

Every feature found in ZENworks 11 flows from our vision of the open enterprise, which embraces the value of creating a simple, secure, productive and integrated IT environment that works across heterogeneous systems. ZENworks 11 empowers IT organizations to manage systems in ways that support real users—with all their various security, location, device and other needs—while still maintaining simple, centralized control over the entire end-user environment. As an essential corollary to this philosophy, ZENworks 11 also gives IT departments the freedom to manage their systems according to the paradigm that best reflects their organization’s business policies—and the IT staff’s preferred working style. With ZENworks 11, IT departments can choose to manage systems tactically (on a device-by-device basis) or strategically (in synchronization with business policies) using any combination of four distinct management paradigms:

- Device-based management
- User-based management
- Management by location
- Management by exception

DEVICE-BASED MANAGEMENT

Many organizations base their configuration management practices on the devices they manage. In fact, this is the default method used by most competing configuration management products on the market today. ZENworks 11 does offer device-based management capabilities that can be used in conjunction with other management paradigms to fill specialized needs. For example, call centers where multiple users share

In the new architecture, ZENworks 11 has been decoupled from eDirectory. Now you no longer need to manage a directory to provide systems management services.
a single PC in shifts, manufacturing-floor PCs and public kiosks are all situations where device-based management may be more appropriate than user-based management. In addition, companies that normally rely on user-based management may need the ability to quickly set up a device for ad hoc, tactical purposes. For example, quickly configuring a device to auto-run a presentation in a conference center might make more sense than creating a new “user” for that single instance. With the ZENworks 11 architecture, you have the option of using device-based management whenever it suits your specific needs. Because device-based management is very familiar to most IT professionals, and because it offers the fastest way to configure a machine before you create long-term user-based policies, device-based management is presented as the default management paradigm when you first install ZENworks 11.

USER-BASED MANAGEMENT
User-based management has always been our specialty. In the new architecture, ZENworks 11 has been decoupled from eDirectory, which is no longer a key requirement for the product to function. You no longer need to manage a directory to provide systems management services. This does not mean you cannot benefit from integrating ZENworks 11 with your existing eDirectory environment. In fact, you can continue to use your existing directory infrastructure for user identity information, but you do not need to extend the schema or install the product on a server that runs eDirectory. In addition, ZENworks 11 offers the flexibility to connect natively to both eDirectory and Microsoft Active Directory to provide user-based management.

User-based systems management—which leverages user identities, group roles and business policies—is the gold standard for automation, security and IT control. True user-based configuration management disassociates users from the specific devices they use. This makes it possible to treat users as the company’s most valuable managed asset and relegate devices to their proper role as tools that must serve the needs of users. Allowing people—rather than machines—to be managed as first-class configured entities means that policies, applications and other configuration details can follow users from machine to machine.

While device-based management is almost purely tactical, the user-based paradigm represents a truly strategic approach to systems management. With ZENworks 11, you can mix and match both approaches—based on your changing business and IT requirements—by using the management by exception paradigm.

For example, ZENworks 11 allows you to apply a policy to a specific device and then selectively override that policy based on the identity information of the user who is currently logged on. Conversely, you could choose to override a general user- and role-based policy based on a specific machine and its context, such as when a mobile device attempts to access the network from outside the firewall.

MANAGEMENT BY LOCATION
In ZENworks Desktop Management, proximity (site lists) and workload management (source lists) are used to manage resource availability. ZENworks 11 replaces site lists and source lists with locations. Locations are sets of network environments that define how the ZENworks agent understands where the device is physically located. Network environments are defined using a number of rules based on criteria such as subnet, Domain Name Service (DNS) server, Windows Internet Naming Service (WINS) server and router information. By modeling all of the locations in your environment based on all of the wired and wireless networks that exists there, locations can then be used to control what resources are offered to managed users and devices.

Laptops have provided many benefits to today’s modern workforce, but they present IT management challenges. Take the example of an application rollout. A laptop could be connected in an office, airport, hotel, home office or even across a 4G cell phone connection, all of which have different connection characteristics that may not be suitable for distribution activities.

Desktops, too, present location-based management challenges. We clearly do not want them reaching out over wide-area-network links to communicate with our management system. As far as possible, all management activities using the network should occur locally, and anything that needs to touch the central site should only happen when network loading is low. But it is not just management activities we wish to control based on device location. We also want to adjust the security posture. Many organizations take the view that devices inside the office network perimeter are reasonably safe, but when outside they are at risk. Therefore items such as firewall configuration, allowed pluggable devices, encryption and wireless settings should be adjusted based on location.

The unique ability to use information about location adds a whole new dimension for management. You can create policies that reflect business requirements for any given location that a device may be in and define the endpoint’s behavior when it is located somewhere not deemed part of the corporate infrastructure.

ZENworks 11 makes it possible to treat users as the company’s most valuable managed asset.
MANAGEMENT BY EXCEPTION
When you evaluate any configuration management solution or paradigm, you should carefully consider two important criteria. First, how well does the management paradigm scale? And second, how large a burden does it place on your IT staff as they continually update the solution to accommodate changing business policies? ZENworks 11 can provide the right answers to both of these questions. We pioneered the management-by-exception paradigm, and ZENworks 11 continues to offer it as a powerful tool for continuously adapting to changing business policies and practices with minimal IT effort.

In most situations, management by exception serves as a complement to policy-driven management paradigms. It allows for the strict, high-level enforcement of general configuration management rules across user or device groups, while still permitting exceptions at a more granular level to accommodate specialized needs.

For example, normal business policies may allow employees to remotely access the corporate network. However, applying this policy across the board to all desktops—including PCs in the finance and legal departments, for example—could expose the company to regulatory penalties and corporate spies. Exception-based management allows IT departments to create and automatically enforce general access policies across the whole company and then apply more restrictive policies to PCs and users in specific groups or departments. In this case, the additional stricter policy would restrict access to normal business hours and authorized on-site users. Exception-based management allows for complete flexibility, without requiring IT to manage separate policy silos for each type of user and machine.

Open and Secure Protocols
ZENworks 11 is based on secure and open protocols. ZENworks no longer relies on NCP and therefore the OES Windows Client is no longer a requirement for the product to function. In addition to this, customers who have chosen Microsoft Active Directory as their identity store no longer need to deploy the ZENworks Middle Tier server, middleware required to communicate to eDirectory on behalf of the managed user or device. Communication to eDirectory or Microsoft Active Directory is performed using Lightweight Directory Access Protocol (LDAP) by the ZENworks primary server. All functions of ZENworks can be categorized into the following roles:

- Configuration
- Content
- Collection
- Authentication

Access to ZENworks web-services are performed using Hypertext Transfer Protocol Secure (HTTPS) from managed devices and can therefore happen inside or outside of a corporate firewall with no change in behavior from the end user. ZENworks 11 offers great flexibility in how you wish to host your ZENworks services and how you wish to manage and maintain your Identity.

One Management Tool for Control
As an administrator of ZENworks Desktop Management, you will be very familiar with ConsoleOne, a thick administration tool for managing ZENworks managed users and devices. Without ConsoleOne running on your local endpoint, management of ZENworks Desktop Management is not possible. Managing devices from outside the firewall on non-IT machines is also not possible without virtual private network (VPN) and other remote desktop solutions.

All administration in ZENworks 11 is performed using a web-based tool called the ZENworks Control Centre, which is offered as a secure web-service on every ZENworks primary server. The ZENworks Control Center is task-orientated as opposed to orientated on the structure of your eDirectory environment. Because the tool is web-based, if a primary server is in your DMZ environment, you can perform device and user management securely from anywhere in the world without the need of VPN or waiting for ConsoleOne to connect to your eDirectory systems. The ZENworks Control Center is role-based, which lets you assign roles to eDirectory and Microsoft Active Directory users and groups. This gives you speedy access in your environment while letting you specify exactly what configuration tasks you want the users to be able to perform.

Managing with ZENworks Desktop Management requires the OES Windows Client, ConsoleOne and all of the relevant ZENworks snap-ins installed and configured on your endpoint. To manage ZENworks 11, you need a browser.

One Agent for Enforcement
A modular and adaptive agent enforces all ZENworks 11 management capabilities. A core agent performs common tasks, such as communication to the ZENworks zone. Additional modules that complement the core agent provide functionality that are specific to product solutions or even functions within products. ZENworks 11 provides tight centralized control over the modules running on managed devices with no need to visit the physical device.

No other vendor can come close to offering the flexibility that ZENworks offers.
For example, if ZENworks Patch Management is required, ZENworks 11 applies the patch management modules to the core agent automatically based on your configuration. Compare this to traditional ZENworks, where products such as ZENworks Patch Management are separate products with separate agents, and you can see how the ZENworks adaptive agent can benefit you by simplifying the complete endpoint lifecycle management.

Another change is the way that the client and server communicate with each other. Although a ZENworks adaptive agent is required on every managed device, the bulk of the logic calculation and workload happens on the server side.

In ZENworks 11 it is also possible for configuration changes and jobs to be sanctioned in real-time using ZENworks Quick Tasks. Quick tasks are defined in the ZENworks Control Center and are driven by the ZENworks server that is connected directly to the managed device using HTTPS and the Simple Object Access Protocol (SOAP). This level of control is not available to you in ZENworks Desktop Management.

AGENT DEPLOYMENT
Agent deployment in ZENworks Desktop Management is a challenge without an administrator present. In some cases login scripts can be used if the authenticating user has the relevant access to the local machines. In other cases an engineer must physically locate the machine to install the ZENworks Desktop Management agent. ZENworks 11 makes deploying the agent to machines that are not under management much easier. Using the ZENworks Control Center, you can detect devices on your network using LDAP or IP-based discovery and then remotely deploy the agent to these devices.

INTEGRATED END-USER INTERFACE
The separate client programs you are accustomed to with ZENworks Desktop Management, such as Workstation Manager and Remote Control, have been replaced with a common interface called the ZENworks Icon. The ZENworks Icon is displayed in the notification area at the bottom of the desktop. The Micro Focus Application Launcher Window and Application Launcher Explorer views are still available using the ZENworks Explorer.

INVENTORY-ONLY MODULE
If you have workstations that do not meet the requirements for installing the adaptive agent, you can still receive inventory information from these workstations by installing the inventory-only module.

Application Lifecycle Management
The ability to control the availability of software to end-users has been an outstanding capability of ZENworks from day one. No other vendor can come close to offering the flexibility that ZENworks offers. In ZENworks 11, application objects are now referred to as bundles and their power and flexibility are even greater.

BUNDLES
A bundle is a package of files and information that is similar to an application object but with far greater power and flexibility. A bundle wizard lets you create a bundle, configure the actions associated with a bundle and then assign bundles to devices or users. There are four types of bundles: Linux, Linux dependency, preboot and Windows.

ACTION SETS
A bundle contains actions to perform with its content. All actions are divided into six categories, referred to as action sets: Install, Launch, Verify, Uninstall, Terminate and Preboot. These action sets, along with the ability to define how and when content is distributed, allow ZENworks 11 to control the complete lifecycle of an application, not just its installation.

CACHING
Each managed device still uses a cache directory. However, the cache location has moved from drive_root
alcache to zenworks_home
cache. All bundles are copied to the cache directory before installation. By default, this copy occurs when the bundle is first launched on the device.
Forced Caching is still available in ZENworks 11 by specifying a distribution schedule. The schedule can initiate an immediate distribution of the bundle or delay distribution to a future time.

**SATELLITE SERVER CONTENT ROLE**
To improve content access for a group of devices where a local application repository may not exist, you can promote any managed device to a satellite server with a content role. The content role of a satellite server is useful in slow wide area network (WAN) configurations where the server infrastructure may not be available. Promoting a managed device to a satellite device is automated and configured through the ZENworks Control Center. After a satellite role has been defined as content, authentication, preboot execution environment (PXE) server or collection, the managed device takes on the role(s) on the specified roles on the next refresh with no manual input from the administrator. Whether it’s the receptionist’s desktop, a Linux server or even a virtual machine, ZENworks 11 allows any managed device to take on the content role. Try doing that in ZENworks 7.

**Rights Escalation**
The key to successful management is restricting the user’s ability to invoke unnecessary change on an endpoint while still keeping them productive. The ability of ZENworks 11 to elevate rights to enforce change is key to keeping users secure and productive. ZENworks 11 offers the following means by which to execute applications on a managed device:

- **Run as a logged-in user.** The executable inherits the logged-in user’s credentials. For example, the executable has the same rights to the registry and the file system as the logged-in user.
- **Run as a secure system user.** The executable is run under the local system user and inherits administrator-level credentials. For example, the executable has full rights to the registry and the file system. Because the security level is set to Secure, the executable’s interface is not displayed to the user and the executable is only visible in the Task Manager. This option is useful when running executables that require full access to the workstation but require no user intervention.
- **Run as a dynamic administrator.** A dynamic administrator is an administrator account that is created on the fly to perform certain procedures, such as installing applications. Using a dynamic administrator is helpful when installing applications, such as some MSI applications, for example, that cannot be installed in the system space. When you select this action, the dynamic administrator is created, it performs the required tasks and then the account is deleted.

**NETWORK CREDENTIALS**
If you choose to use a Windows file share to host some or all of your application content, ZENworks 11 allows you to restrict read access to that share to a single IT-defined user. This credential can then be stored securely in ZENworks and used on behalf of the managed user to access application installation content. The result is that ZENworks 11 allows you to maintain your application repositories while ensuring that a user does not manually copy application installers from this location to use on devices not managed by IT.

**Secure Application Repositories**
If you have chosen to use file shares for application content, a number of challenges exist for you including:

**APPLICATION CONTENT SECURITY**
For an application to install, a user must have read access to the application share. If a user knows where the application repository exists, the user could use his or her read access to copy all application installers to removable media for installation on a non-IT-managed device. Managing read rights on a per user and per application is not possible with Microsoft Active Directory, but with ZENworks Desktop Management you can do this with trustee rights management. Managing eDirectory trustees through Application Objects is, however, not a trivial task and can add a significant burden to your administrators.

**APPLICATION CONTENT SYNCHRONIZATION**
For an application to be highly available to all users no matter where they are, application content must be synchronized to all of the locations that could possibly need it. ZENworks Desktop Management does not provide a means of doing this, forcing many customers to rely on the tiered electronic distribution features in ZENworks Server Management, which makes another tool to install and maintain in your environment.

ZENworks 11 provides a managed content repository on each primary server. Application, policy and system update content is automatically and securely synchronized to primary servers and satellite servers within the given time window and limited to the bandwidth that you specify as the ZENworks administrator.

All content that is placed into the Content Repository is obfuscated and encrypted meaning that even if a user somehow accesses a ZENworks primary server’s file-system, all content is not in human-readable form, therefore all application content is secure. As content is downloaded by the ZENworks agent using HTTP, applications can be delivered to a device easily and securely even if they are outside of the firewall.
Content management is built into ZENworks 11 ensuring that content is always in the right location for users whilst allowing tight control over when synchronization occurs and how much bandwidth can be used during the synchronization process.

Object Management
Devices can be arranged into device folders however you wish, perhaps geographically or even by business units. No longer is the way you organize your managed devices based on the eDirectory structure in your environment like it is with ZENworks Desktop Management.

In conjunction with device folders, groups and dynamic groups are available to make targeting groups of devices very easy. From the perspective of software and policy assignments, groups and dynamic groups have the same function. The only difference between the two types of groups is the way that devices are added to the group. With a group, you must manually add devices. With a dynamic group, you define criteria that a device must meet to be a member of the group, and then devices that meet the criteria are automatically added by ZENworks.

ZENworks 11 ships with predefined dynamic groups for targeted devices on specific Operating Systems, such as Windows XP, Windows 7, OSX Lion and SUSE Linux Enterprise Server. You can also define your own dynamic groups. If for example, IT has a test environment with a dedicated class-C network 172.17.2.0, a dynamic group can be created with a rule specifying that the IP address must match 172.17.2/24; ZENworks will automatically add all devices to the group that connect from this location.

Change Management
A great feature of ZENworks Desktop Management is that the instant you change a policy or application object, all users and devices receive the change the next time they refresh. A potential drawback is that all changes are instant!

If 2,000 users inherit an application object and a change is made that causes a service disruption, all 2,000 people will be subject to that disruption. One potential way around this is to keep track of versions of applications and policies by manually creating copies of objects and storing them in a different location. This is by no means ideal.

ZENworks 11 provides change management for all bundles and policies in the system. This feature allows users and devices to be marked as test, and any change you make to any policy or bundle is placed into a sandbox that only test users or test devices can access. The use of the change sandbox and test users and devices allows IT to easily test changes to existing policies and bundles without having to commit the change to everyone. Once a change is deemed successful, the change can be published to all other users and devices in the zone. Finally, if a problem is discovered further down the line, any bundle or policy can be reverted to any previous version that has been recorded through the change management system. This capability is leagues ahead of what is available to you in ZENworks Desktop Management.

ZENworks Database
eDirectory is no longer required for data storage. Instead, the ZENworks Configuration Management database is used. This is different from traditional ZENworks Desktop Management in several ways.

Firstly, ZENworks 11 has a dedicated ZENworks Database. The ZENworks database replaces the old ZENworks database and all eDirectory tree object information stores. Instead of eDirectory containers and contexts, ZENworks 11 stores all information about configuration items in a relational database. ZENworks 11 gives you the choice of database platform, including the following:

- Microsoft SQL 2008 R2
- Oracle 11G R2
- Sybase (ZENworks provides this database platform free of charge)

As all data and configuration items are stored outside of eDirectory, this means your connection to eDirectory for user-based managed is a read-only connection. This also means that ZENworks 11 never requires you to update or modify the eDirectory schema, music to your ears, I am sure.

Managed and Automated Software Updates
Unless you are using the Tiered Electronic Distribution features of ZENworks Server Management, the upgrade process for ZENworks Desktop Management requires a manual installation using removable media on each ZENworks server in the environment. ZENworks 11 does things a great deal better by offering a system update service.

The ZENworks System Update service connects to our online repositories to download all product updates. Product updates then become content as any other applications and are synchronized around the ZENworks zone. When it’s time to upgrade the ZENworks primary servers, ZENworks satellite servers and managed devices, the system update process is used for the following processes:

ZENworks ships with predefined dynamic groups for targeted devices on specific Operating Systems, such as Windows XP, Windows 7, OSX Lion and SUSE Linux Enterprise Server.
Notification and acceptance from the end user (optional)
Deployment of the update
Controlled reboot behavior

All of these items are completely automated and do not require IT to visit the managed device. In some cases, the ZENworks primary server needs to have a media upgrade performed on it. In this case this step will automatically populate the zone with the required updates for the remaining ZENworks satellite and managed devices.

Need Microsoft Windows 7?
Migrating to Microsoft Windows 7 is not a trivial task but is a common requirement for ZENworks customers. ZENworks Desktop Management does not support Microsoft Windows 7 as a managed platform. This support is offered only in ZENworks 11. Migrating to Microsoft Windows 7 encompasses a number of steps including but not limited to:
- Microsoft Windows 7 readiness reporting
- Personality migration of application and operating system settings
- Operating system deployment and configuration
- Application delivery
- Policy enforcement
- Windows patch vulnerability detection and remediation
- Detailed migration reporting

ZENworks 11 can automate all of these steps through our single pane of glass paradigm. See [www.novell.com/products/zenworks/migrate-windows7.html](http://www.novell.com/products/zenworks/migrate-windows7.html) for more details.

How To Migrate to ZENworks 11
Approach migrating your environment from ZENworks Desktop Management to ZENworks 11 in the following way.

**Plan**
- During this phase, technical and business requirements must be captured, documented and agreed upon by the relevant stakeholders.

**Prove**
- Prove the solution by building a lab environment.
- If you have a VMware virtual environment, ZENworks can be deployed as a virtual appliance.
- After the zone is configured, familiarize IT personnel with the new concepts of the product and how they relate to your existing environment.
- Use the ZENworks migration tool to bring ZENworks Desktop Management objects into your test zone.

**Pilot**
- Build the production zone and pilot to carefully selected groups of users.
- Ensure the end-user experience is acceptable by proving that policies are correct and applications are available to ensure users remain productive during the migration experience.

**Deploy**
- Phase the migration in conjunction with a detailed implementation plan. The plan should ensure that the necessary infrastructure is in place before connected users are migrated.

**Retire**
- Decommission or reuse old ZENworks hardware. In some cases, old servers can be reprovisioned as ZENworks satellite devices.

You can find further information on these topics in the Systems Planning, Deployment and Best Practices Guide for ZENworks.

The ZENworks Migration Tool Makes Life Easy
ZENworks 11 provides a migration tool for ZENworks Desktop Management policies, applications, images, workstation objects and associations. The migration tool reads information from the ZENworks Desktop Management environment and creates corresponding objects in the ZENworks 11 zone based on a migration model that you define. The tool is nondestructive and can be run multiple times as the modeling information is saved for repeat use. More information on the migration tool can be found here:

Frequently Asked Questions
The following section covers some of the commonly asked questions ZENworks 7 customers may have.

**Question:** I’ve heard ZENworks 11 is slower and does not scale. Is this true?

**Response:** ZENworks Configuration Management performs very well in large enterprise environments. In fact, testing shows that even when more than 1,000 devices demand a software distribution from a single server—a simultaneous load rarely observed in real-world networks—ZENworks 11 can handle the load. ZENworks 11 has been scale tested to manage 40,000 devices in the same management zone. The ZENworks 11 architecture and the use of satellite servers is a great improvement over ZENworks 7 with its server-desktop, peer-to-peer distribution and collection at remote offices. ZENworks 11 reduces bandwidth use, increases system response time and greatly boosts the number of devices that can be managed in a single tool.
Question: I've heard ZENworks 11 costs too much. Why is this?
Response: That information is incorrect. The migration to ZENworks 11 is covered under ZENworks 7 Desktop or Suite maintenance agreements for customers who are current with maintenance. This includes customers with Micro Focus Open Workgroup Suite, as ZENworks 7 is included in the Open Workgroup Suite maintenance. The Micro Focus Endpoint Lifecycle Management suite is also a great way to migrate to the ZENworks 11 architecture while owning Asset Management, Configuration Management, Patch Management and Application Virtualization capabilities.

Question: ZENworks 7 works, so why change?
Response: ZENworks 7 is an acceptable solution for organizations that remain on NetWare or older Windows Server networks and are managing their systems from within ConsoleOne. However, ZENworks 7 does not support the latest versions nor will it support future versions of Windows. Unsupported current versions include Windows Vista, Windows 7 and Windows 2008 Server. ZENworks 7 Desktop Management and ZENworks 7 Suite are currently covered under Extended Support and are no longer under General Support. Extended support will cease in September 2013. Finally, if you wish to manage the complete lifecycle of a device using ZENworks Asset Management, ZENworks Patch Management, ZENworks Desktop Management and ZENworks Endpoint Security Management, you will need different databases, management tools and back-end servers for each product. ZENworks 11 provides a unified architecture, management tool and management agent for complete lifecycle management.

Question: Does ZENworks 11 require more hardware?
Response: New hardware is required to support the new ZENworks primary servers that will be introduced into the production environment. However, once the ZENworks 7 infrastructure has been decommissioned, you can repurpose this hardware in other areas of the business, including as ZENworks 11 primary and satellite servers. Although ZENworks does require more hardware than ZENworks 7, it scales further than LANDesk and requires much less hardware than Microsoft System Center Configuration Manager. Scaling out a ZENworks 11 solution is made simpler through the use of the ZENworks virtual appliance, which offers simple deployment of ZENworks 11 services on a VMware virtual infrastructure.

Conclusion
We have invested heavily in our flagship endpoint management product since 2007 and the work has paid off. We believe that vendors should not force you down the route of a particular operating system, database or directory vendor. We believe one tool should offer complete endpoint lifecycle management. We also believe that having a robust, scalable and extensible architecture is key to meeting the future demands of the markets for which we solve problems. Only ZENworks 11 offers a unified architecture for all endpoint management capabilities that can be deployed across a huge range of physical and virtual platforms, and our modular approach allows us to continually improve our offerings without asking customers to start again with new solutions.

If you are about to start the journey of migrating to ZENworks 11, please note that we provide detailed documentation (www.novell.com/documentation/zenworks11) for ZENworks 11, including:
- Product Overview
- Installation Guide
- Migration Guide
- Systems Planning, Deployment and Best Practices Guide

Please refer to this documentation, especially the Systems Planning, Deployment and Best Practices Guide to see how easy we make migrating to ZENworks 11. See you on the other side!

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About Micro Focus
Since 1976, Micro Focus has helped more than 20,000 customers unlock the value of their business logic by creating enabling solutions that bridge the gap from well-established technologies to modern functionality. The two portfolios work to a single, clear vision—to deliver innovative products supported by exceptional customer service. www.microfocus.com